

# NAVAIR Vision

*One Team Supporting The Warfighter...  
Delivering 21st Century Aviation Solutions  
Enabling Dominance From The Sea*

**Warfighter**

**People**

**Affordability**

**Processes**



# Naval Air Systems Command

## Aircraft Division

- Lakehurst
- Orlando
- Patuxent River



## Weapons Division

- China Lake
- Point Mugu

## Aviation Depots

- Cherry Point
- Jacksonville
- North Island



# Full-Spectrum RDT&E

**Our Mission** is to provide effective and affordable, integrated, interoperable warfare systems to the warfighter, and to support those systems for life

## Our Foundation

People



Ranges



Laboratories



# Military / Civilian Team





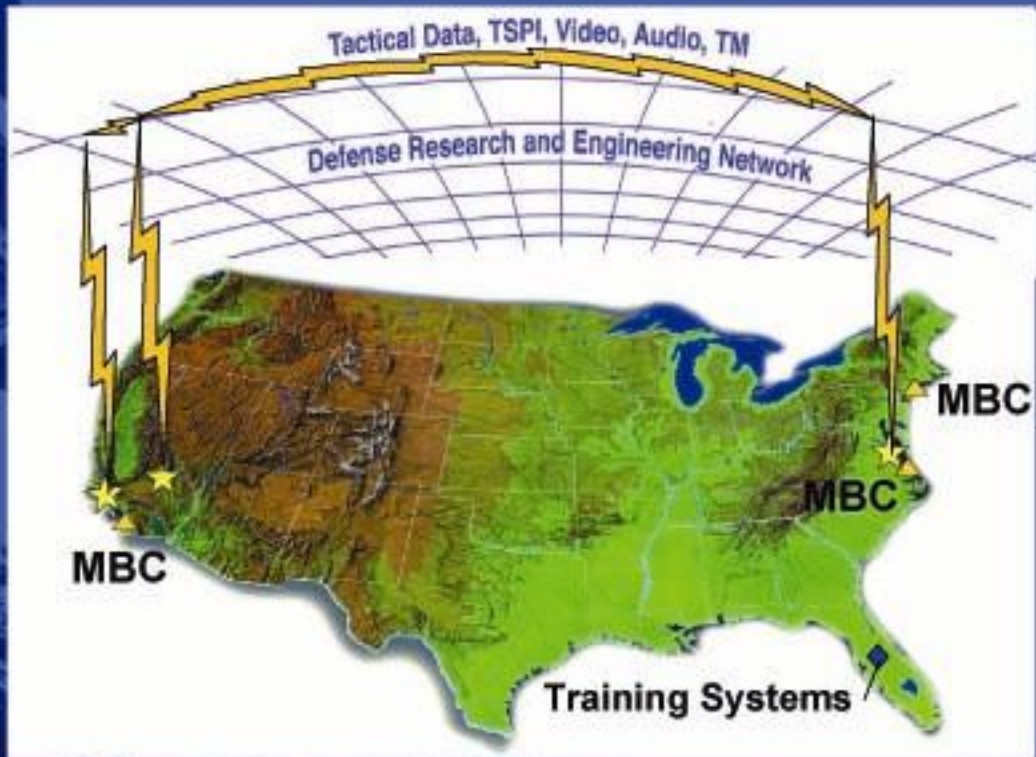
# Range Capabilities

- Land Range: 1,777 square miles
  - Airspace: 20,000 square miles
- Sea Range: 36,000 square miles (expandable to 125,000 square miles)
  - Airspace: 36,000 square miles





# NAVAIR NCW Defense Network (DNet)





# Training The Fleet



**Japanese Test  
on Sea Range**



**Fleet Exercises**



**Targets**



**Superior Valley**



**Marines Firing 155-mm Gun**



**Electronic Combat  
Range**



# Integrated Modeling and Simulation



Five-Axis Carco Table



Virtual Prototyping Facility



Electronic Combat Simulation and Evaluation Laboratory

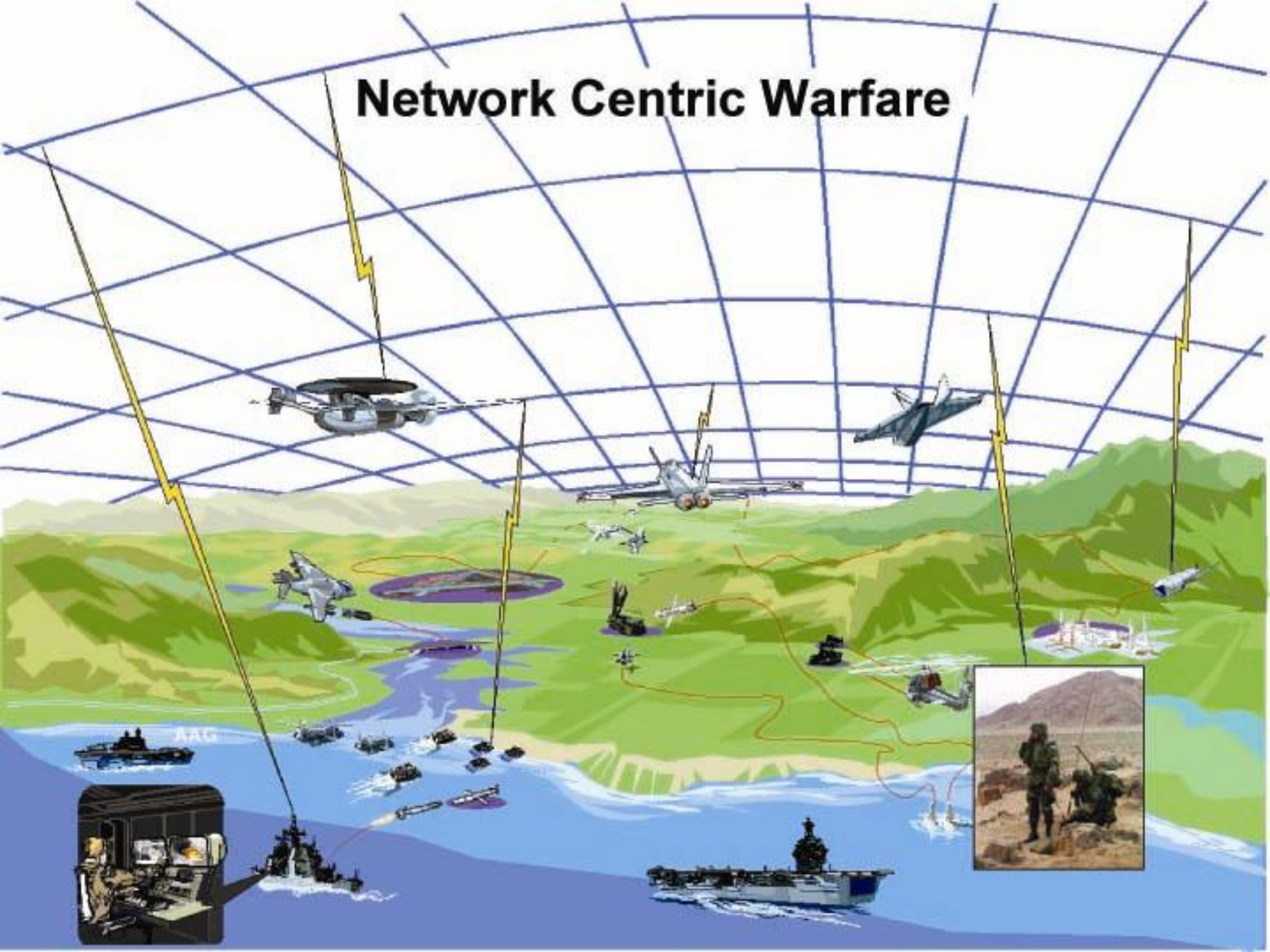


MESA





# Network Centric Warfare

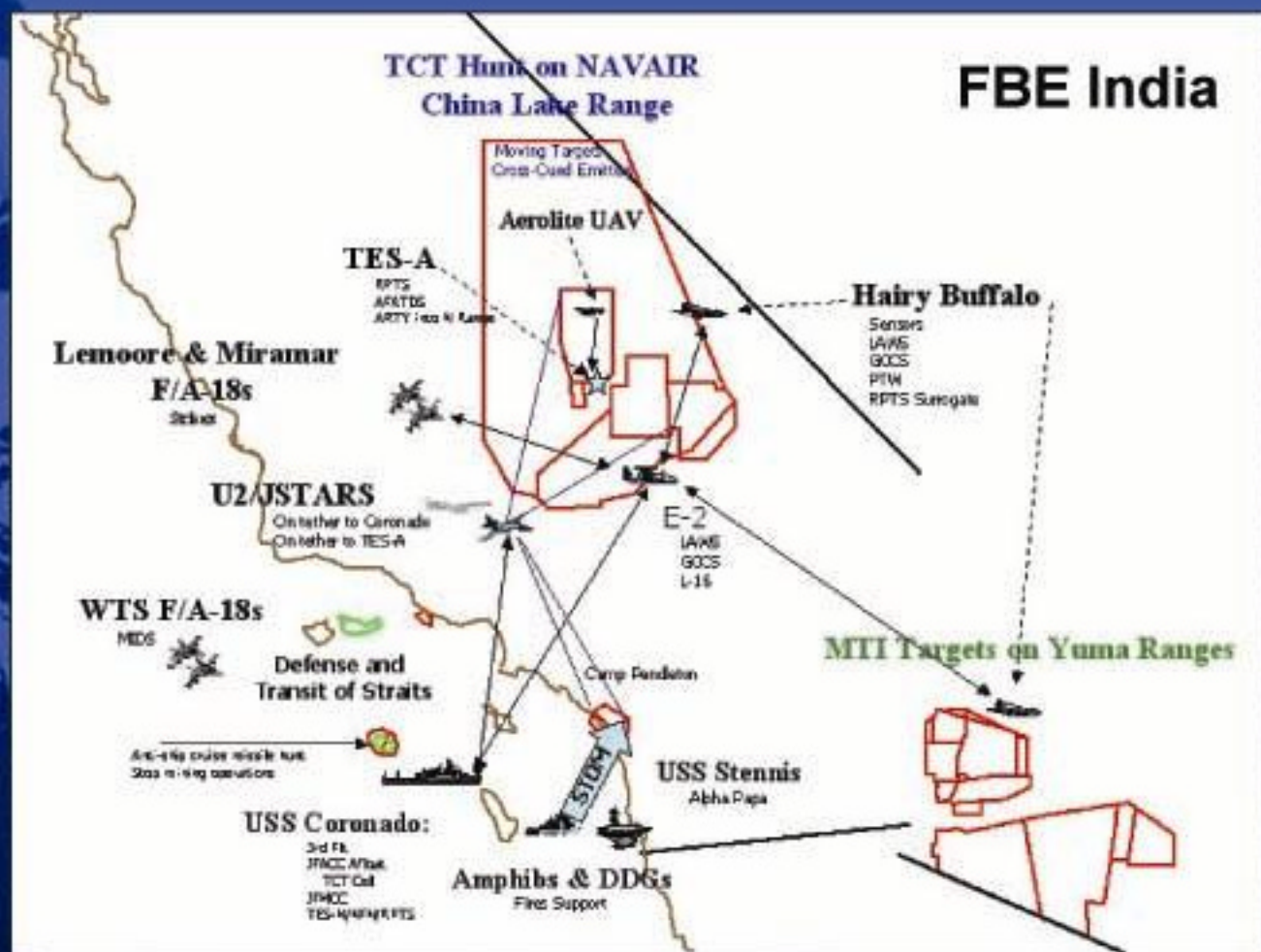




# Fleet Battle Experiments

## Increasingly Complex – WD Increasingly Involved

- FBE Bravo
- FBE Charlie
- FBE Delta
- FBE Echo
- FBE Foxtrot
- FBE Hotel
- FBE India
- FBE Juliet







## Joint Tunnel Warfare Center NAVAIR - China Lake Tunnel Systems



**National asset at NAVAIR - China Lake:**

**Over 300 mineral mines of various configurations**

**Bunkers**

**Vertical Shafts**

**Multi-level Tunnels**

**All thoroughly documented and mapped (NWC TM 5336, NWC TP 6465, NWC TP 6498, NWC TM 5340)**

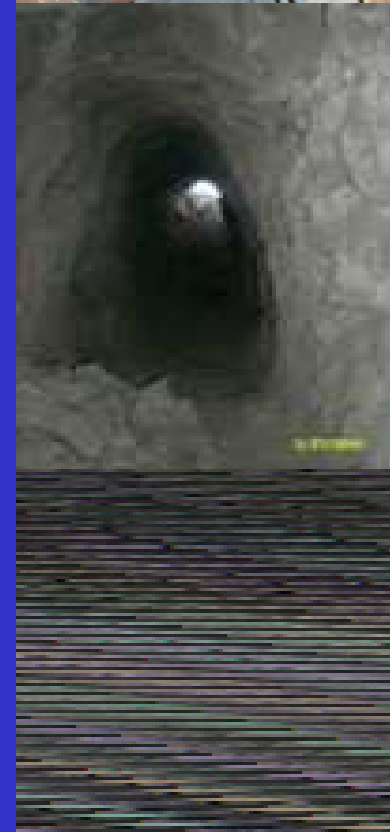
**NAVAIR – China Lake in Southern California at the same latitude as Kabul, Afghanistan - adjacent to Ft. Irwin**

**Thousands of tunnels located on federal property in proximity to China Lake**

**Isolated Mojave Desert location away from population centers - secure military facility**

**Strong world-class weapons/technical development capability co-located at NAVAIR – China Lake**

**Potential for live-fire in select tunnels**





# Joint Tunnel Warfare Center Existing China Lake Initiatives



- **Initiating Satellite Imaging project with NIMA/DTRA to locate and map tunnel systems with China Lake tunnels as baseline**
- **Providing information to special forces commands regarding potential opportunities**
- **Current SFAE( Solid Fuel Air Explosive) Tunnel weapons program in place**
- **Proposed Thermobaric Weapon development program**





# NAVAIR/FBI/EOD/Law Enforcement Cooperation

## Large Vehicle Bomb Post Blast Crime Scene School



## Concept Description

- Large Vehicle Bomb Post-Blast course initiated by SABB Kevin Miles & EODMU 3 Det China Lake. 8 of 27 classes have been held at China Lake. COI is now supported by FBI Academy and attended by EOD personnel from all four services and law enforcement.
- Graduates of advanced LVB course build vehicle bombs for future classes.

## Funding

- FBI Academy pays for law enforcement.
- EOD commands pay for military TAD.
- Ranges provided by NAWCWD (SNORT).
- Classroom provided by NAWS China Lake.

## Objective

- Provide qualified military and law enforcement personnel able to successfully work a large vehicle bomb crime scene such as Oklahoma City or USS Cole.

## Requirement

- Law enforcement and military EOD forces are best suited to support FBI investigation w/out compromising evidence found at the scene.
- Military EOD personnel are pre-positioned overseas and throughout the country. They constitute 20% of course graduates, are considered first responders to events in their AOR, and will be called upon to lead until FBI investigators can get to the AOR.
- Although a large number of personnel are required to work a scene, only 1% of law enforcement are currently qualified to work LVB scenes.

## Payoff

- Course graduates have the knowledge and training necessary to successfully prosecute a scene.

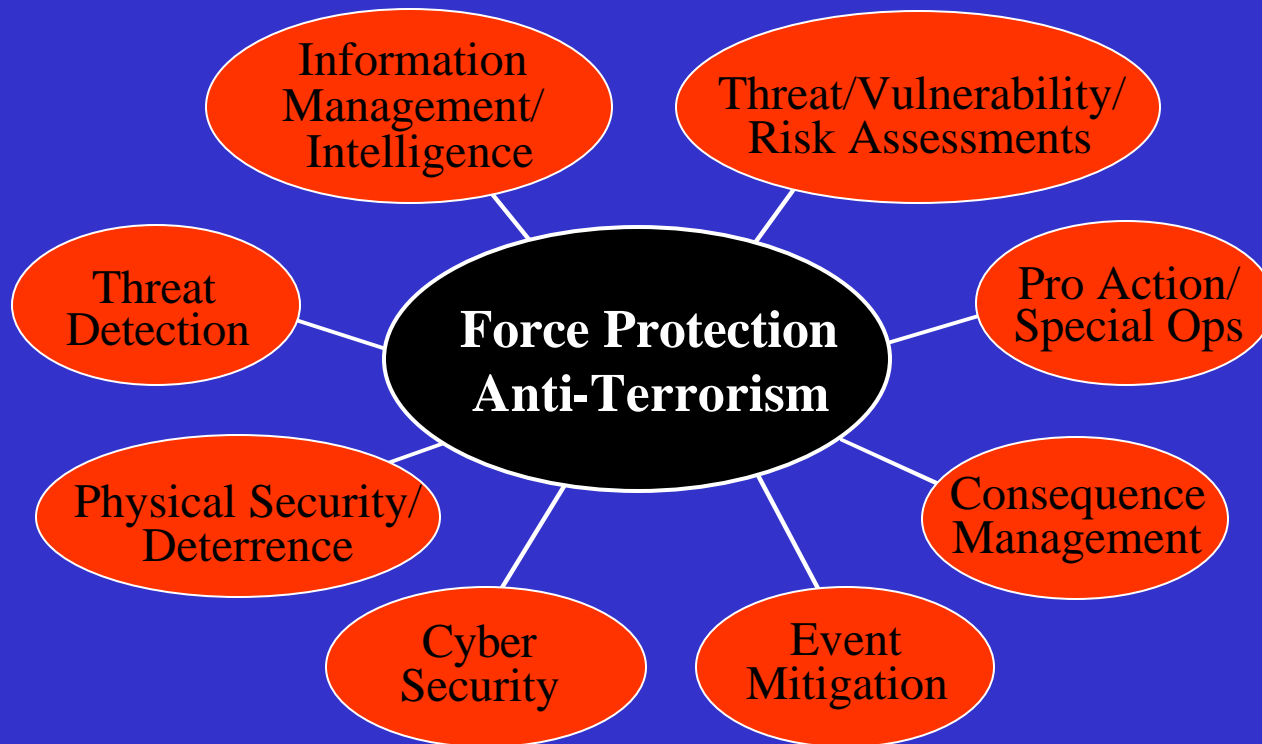
## Points of Contact

- SABB Kevin Miles, FBI. Los Angeles Task Force on Terrorism. (310) 477-6565.
- OIC, EODMU 3 Det China Lake. DSN: 437-6311.  
<mailto:fridleywk@navair.navy.mil>





# Homeland Security Scenario Development







# Asymmetric Warfare Candidate Scenarios

## EXPEDITIONARY

- Masked Attack (LOE-0)
  - Conventional military operation with OPFOR attack on US military using unconventional weapons (chem/bio) masked by other military events
- WMD Attack
  - OPFOR intent to use WMD as driver for pre-emptive attack by CVBG against WMD storage/production/delivery means
- Infiltration, contraband/smuggling
  - Exploit multiple sources of intelligence with multiple responders to detect/neutralize terrorist CBRNE weapons

## HOMELAND SECURITY

- Homeland Infiltration, contraband/smuggling
  - Same as above except modified for US Homeland
- Terrorist Harbor Attack/Coastal Raider
  - Attack on US port requiring military augmentation for both crisis and consequence management



# Scenario

July 6 – USS Coronado departs Pearl Harbor. Intel reports country “Orange” might deploy **bio/chemical** weapons. Increase in military activity noted. “Purple” may target U.S. embassies

July 7 - 40 sick at embassy in “Green” (Santa Cruz Island). Intel suspects biological attack and reports facilities around Pt. Mugu producing chemicals for warfare. Orange military activity increases.

July 8 - 60 more sick, 5 dead at embassy. C3F activates JISE. Intel reports chemical cargo docked at Pt. Hueneme. 4 Orange conventional bomb making facilities may be able to convert to chemical bombs.

July 9 - 10 more dead. Embassy bio attack confirmed, no known antidote. USS Coronado enters Gulf. Cargo vehicles enter and leave chemical plant. C3F JISE provides notional response. Sensors deployed to track **chemicals to weaponization facilities**.

July 10 - Orange recon aircraft detected monitoring JTF progress.

July 11 - Intel reports Orange will deploy chemical and other weapons against fleet. C3F authorized to take all necessary defensive and offensive measures. Extraction of embassy personnel (NEO) conducted, and **strikes planned against time sensitive targets**. Attacks occur against NEO ships.





# Harbor Attack/Coastal Raider Scenario

Homeland Defense scenario presented is representative of ability to develop and execute complex scenario-based events and is designed for maximum exercise of civil/military relationships/interfaces

## Phase 1. Alertment

Based on captured documents in the war on terrorism, intelligence sources predict a near-term sea borne based terrorist attack on a California seaport; Coast Guard coastal patrols are augmented by Navy/Naval Reserve ships and aircraft

## Phase 2. Surveillance and Search

Database monitoring indicates several ships with possible indications that warrant further monitoring; Coast Guard and Navy/Naval Reserve conduct V, B, S, S. Boarding is considered potentially hostile. LL

## Phase 3. Harbor Entry and Attack

Specifics of the entry/assault are dependent upon the intent of the terrorist mission; e.g, deny use, create diversion, inflict maximum casualties, etc.

## Phase 4. Breakout of the Harbor Area

Using the attack as a diversion, terrorists attempt to breakout of the harbor area – with potentially WMD weapons. Travel through densely populated areas requires surveillance/tracking but limits apprehension.

## Phase 5. Attack on Terrorist Encampment/Neutralization of remaining terrorists

Nature of threat requires tailored assault team with specialized capabilities; law enforcement augmented by military



# *Center for Asymmetric Warfare*

*Meeting the Global Threats  
and Challenges of the 21<sup>st</sup> Century*

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Director, Joint Warfare Programs Office  
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# Purpose

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- To present the Center for Asymmetric Warfare
- Contents
  - Changing Nature of Warfare
  - Asymmetric Warfare
  - Response
  - Concept
  - Team





## 21<sup>st</sup> Century Realities

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- World population: 6.1B in 2000 - 7.2B in 2015
- Science and Technology revolution, particularly IT and Biotechnology
- Global economy and globalization trends will continue
- States will continue to be dominant but - less control of their borders
- US will continue to be a major force in the world community
- Gulf between “Haves” and “Have Nots” will most likely increase







# Threats

- People in Need.... And other local-regional crises - coupled with declining military budgets worldwide
- Rogues, Renegades, and Outlaws
- Terrorism and other Transnational Crime
- International drug cultivation, production, transport, and use
- Other forms of international criminal activity (Cyber-criminals)
- Technology development and proliferation
- Critical Uncertainties



Pakistani Muslim religious groups protest, Sept. 18.

*Intertwined, Mutually Reinforcing, Volatile, Complex, Difficult; Will continue and worsen*



# Transformation

- From a focus on marginal superiority driven by a dominant cold war opponent
- To dominant superiority across the full spectrum of military operations

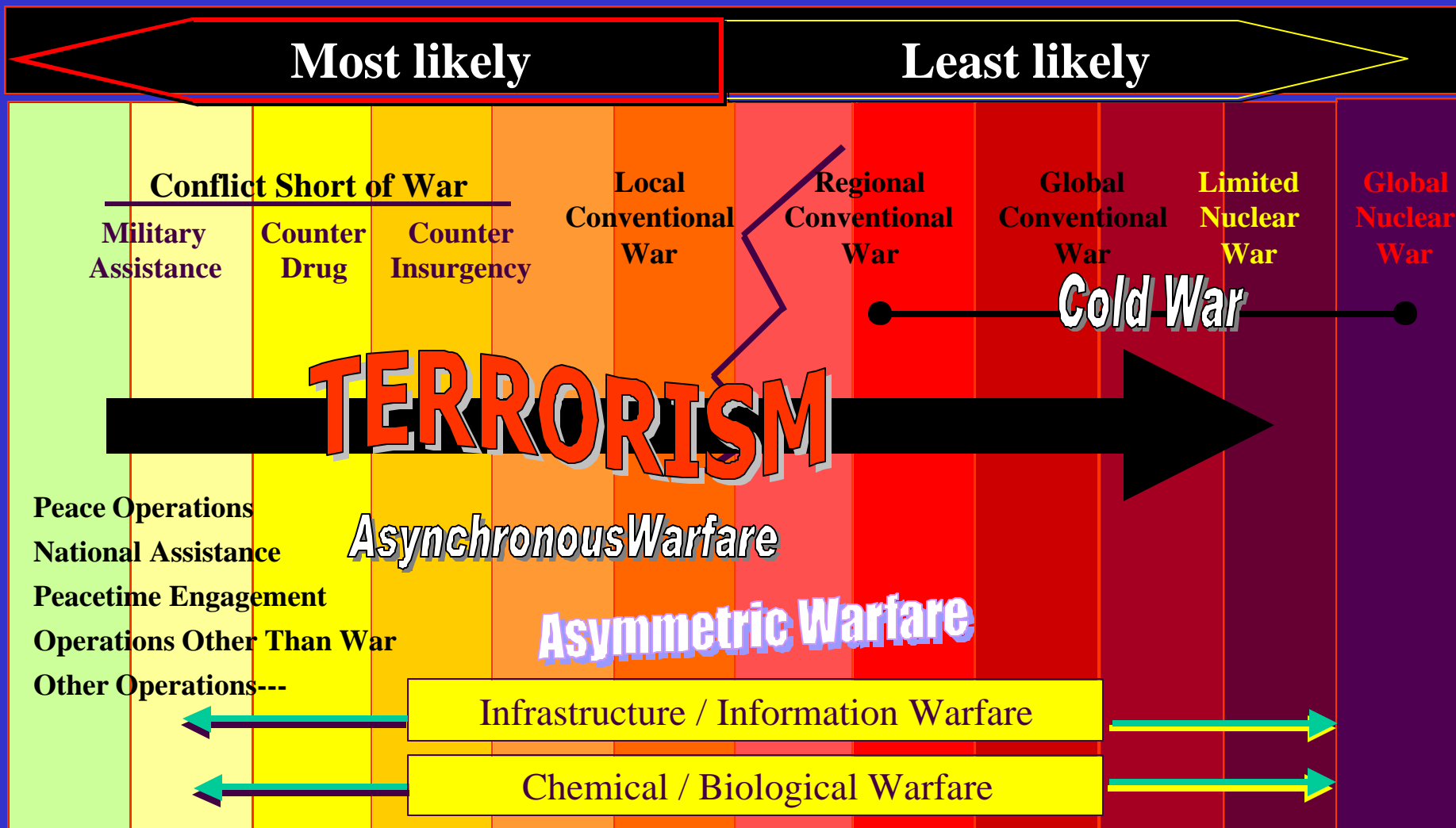
General Larry Welch  
USAF (Ret)  
President and CEO  
The Institute for Defense Analyses







# Spectrum of Conflict





# Asymmetric Warfare

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- A concept as old as warfare itself
- US Military Forces
  - World's only Superpower
  - Well organized, well paid regular forces
  - Play by the rules (Geneva Convention)
  - Expensive Technology
- State-Sponsored Threats
  - Terrorism, WMD, IW
  - Low-cost alternatives to technology
  - Fight on the ground of their choosing
  - Few rules
- Transnational Threats/"Tribes"
  - All of the above, +
  - No rules







# Joint Vision 2020

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“Adversaries are not expected to challenge US strengths, but rather attack it through asymmetric means – identifying vulnerable areas and finding ways to attack them. The potential of such asymmetric approaches is perhaps the most serious danger the United States faces in the immediate future – and this danger includes long-range ballistic missiles and other direct threats to US citizens and territory.”





# Asymmetric Warfare

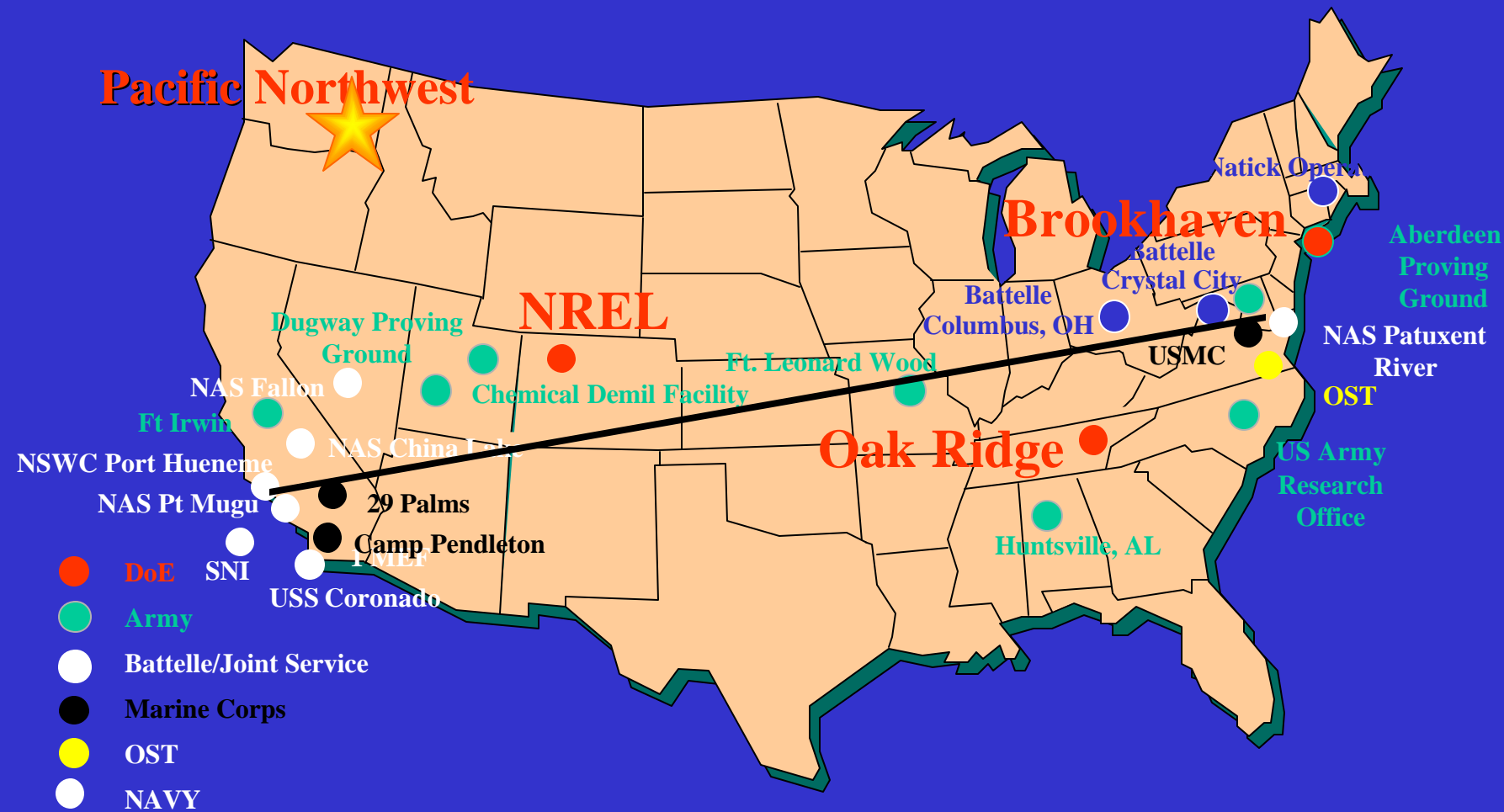
- National Military Strategy (1997) notes three areas of concern regarding Asymmetric Warfare:
  - Terrorism
  - Weapons of Mass Destruction (WMD)
  - Information Warfare





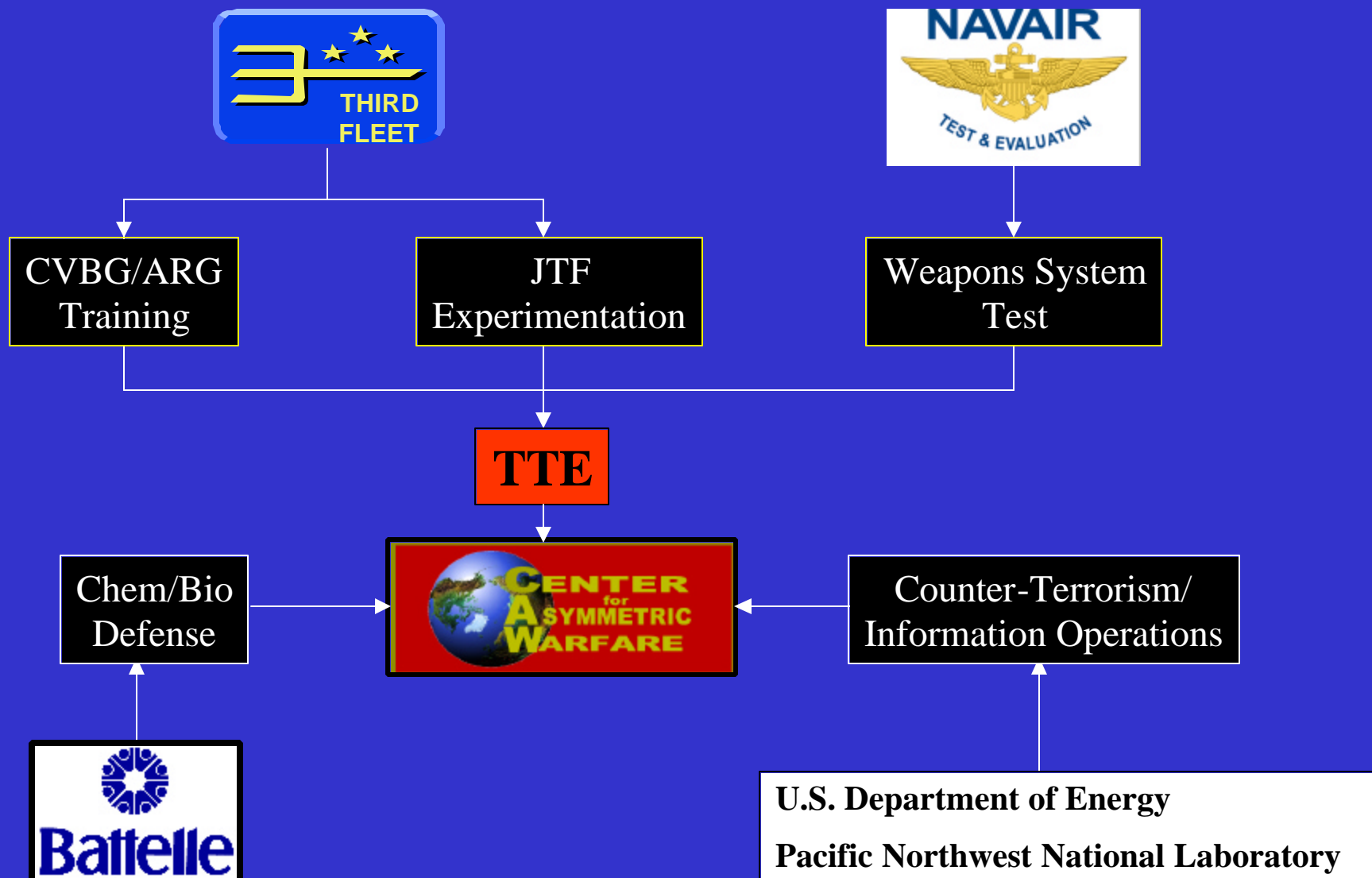


## DoD/DoE Linkages





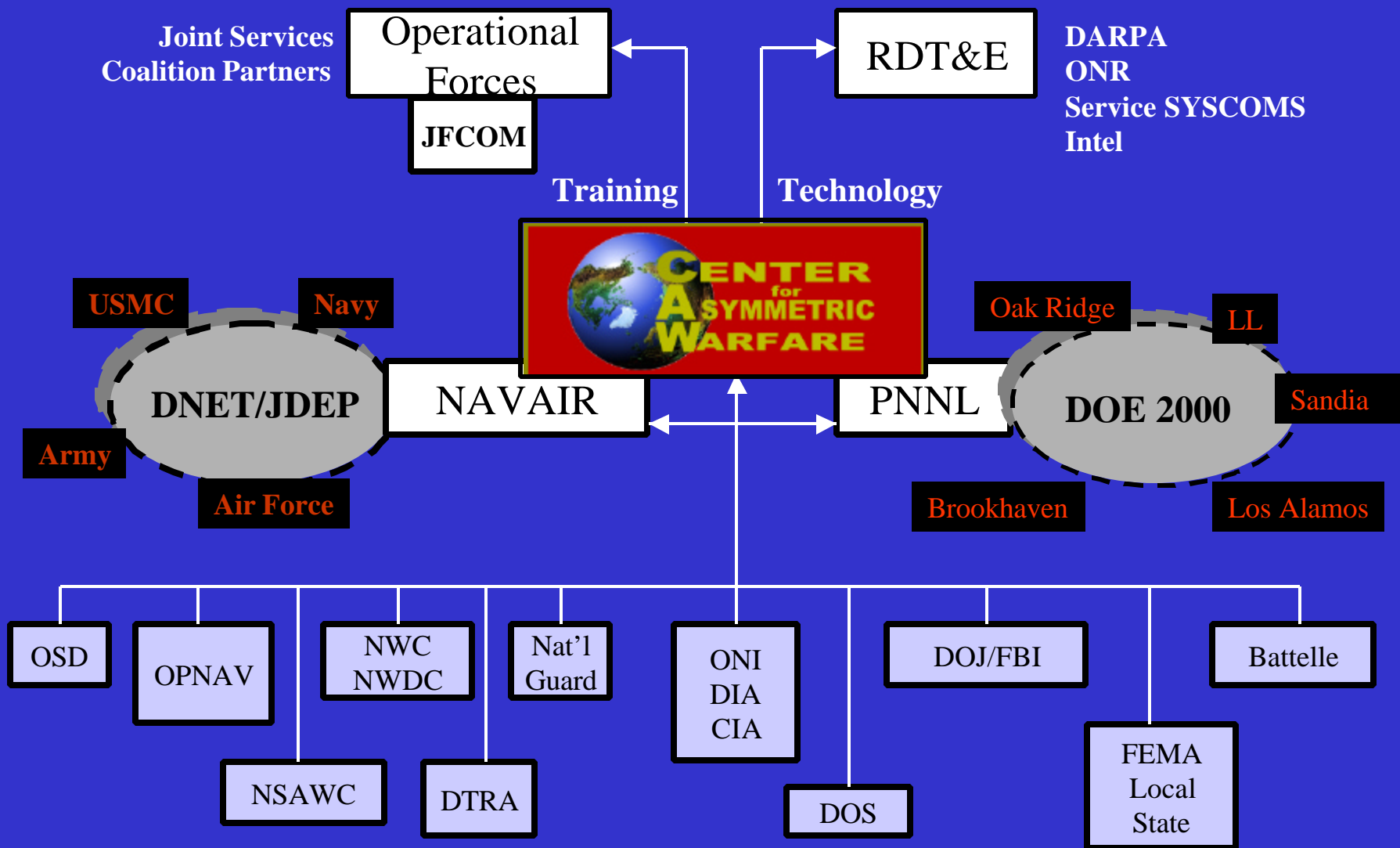
# CAW Heritage







## CAW Concept





# Summary



- “Those who are still mired in fighting another ‘Desert Storm’ or want to continue to live in the comfortable past of a largely bi-polar, superpower-driven global situation may be in for a rude awakening as the nature of asymmetric conflict unfolds in the coming decade.”
- “Effectively countering Asymmetric Warfare requires a vastly different set of tactics, equipment, training and skills than conventional military engagements of the past.”

Clark L. Staten,  
Executive Director  
Emergency Response & Research Institute